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001095
MICHAEL W GLYNN
NOVARTIS CORPORATION
564 MORRIS AVENUE
SUMMIT NJ 07901

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EXAMINER
KUDIRK, S

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UNITED STATES DEPARTMENT OF COMMERCE
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 15

Application Number: 08/926,835

Filing Date: 9/10/97

Appellant(s): Jalett et al

William A. Teoli, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed 9/29/98.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

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A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1-37 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

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5,426,223 Burk 6-1995

5,103,061 Blackborow et al 4-1992

5,210,202 Petit et al 5-1993

Chao et al. "Enantioselective Synthesis of Optically Active Metolachlor

via Asymmetric Reduction." Tetrahedron Asymmetry, vol 3, no. 3(1992), pp

337-340.

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Osborn et al(US 5,112,999).

Osborn et al, column 6, lines 28-68, column 7, column 1, lines 55-57, anticipates instant process in terms of catalyst, solvent, temperature, metal salt and various types of the compounds being hydrogenated.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Osborn et al, Burk, Petit et al, Blackborow et al, and Chao et al.

Osborn et al teach almost every element of the process, see column 1, column 7, column 6, lines 28-68, and various examples. Burk is teaching that in the process of hydrogenation, various catalyst used in herein, is old in the art, see column 2 and 4. Burk also uses metal halides similar to herein, see the abstract. Likewise, Blackborow et al and Petit et al teach hydrogenation of imine, using homogeneous or heterogeneous catalyst. The sole

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difference between the references and herein claimed process appears to be the absence of last step, which is reaction utilizing an acyl halide.

Chao et al ^{is} teaching acylation step starting from the imine.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Chao et al process of acylation in the process of Osborn et al, Burk, Petit et al or Blackborow et al, because Chao et al is clearly teaching such acylation step in the hydrogenation step of imine, see page 399 of Chao et al, with the reasonable expectation of achieving a successful hydrogenated and acylated product, absent evidence to the contrary. Notwithstanding the Chao reference, the acylation using acyl halide is known to the ordinary skill artisan.

(11) Response to Argument

Appellants allege that Osborn et al is silent with respect to the “additionally containing an acid” and hence the anticipation rejection is in error. Furthermore, the appellants argue that claims 28-30, and 34, do not teach or suggest the specific amounts of the additional acid agent, the specific additional acid as required by claims 29-30, and the loop reactor in which the hydrogenation is carried out, and hence these claims can not be anticipatory. The Examiner disagrees with the appellants. At the outset, the reference should be considered in its entirety rather than claims. The various examples in the reference do expressly teach the various amounts of the reactants, the temperature, etc. As to the specific acid, sulfonic group in column 1, lines 55-60, reads on the claimed acid, and as to the specific amount, appellants’

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claim of 0.001 by weight, would fall within the range of liberation of acid in the reaction, absent evidence to the contrary. As to the loop reactor, appellants have not shown that this is the criticality of the invention, and, one of ordinary skill in the art knows that loop reactor is known in the chemical art.

Appellants' claim that Burk neither disclose the addition of halide, and the abstract suggests to cleave the N-N bond, using the halide. The Examiner does not understand probative value of the argument, inasmuch as they have not shown why are they using the halide. In fact, the prior art, both Osborn et al and Burk obtain the compounds which clearly surpass the instant claimed yield and purity, and hence it is apparent, that there is no novelty in the instant claimed process. Appellants' claim of "additionally acid addition" has not shown any superior or unexpected results than the prior arts's in-situ acid. As to the Petit reference, there is no addition of acid, because the starting compound itself is an acid, further supporting the Examiner's in-situ arguments. Blackborow et al is cited to show that homogeneous as well as heterogeneous catalyst can be used for the hydrogenation of imine, and Chao et al is cited to show the acylation of an imine.

Appellants argue that claims 28-30 and 34 are unobvious over Osborn et al in view of the secondary references, in view of specific parameters claimed in the said claims. As pointed out supra, appellants have not shown an unexpected results over addition of an acid versus in-situ acid, no unexpected results noted due to loop reactor, which is well known to one of ordinary skill in the art. Finally, the Examiner would like to point out that none of the

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examples in the instant specification has better results than Osborn et al or Burk, and inasmuch as the process is taught in the prior art similar to claimed herein, the claims are no more than a mere combination and variation of prior art teachings, with inferior results than the prior art, is indeed prima facie obvious, absent evidence to the contrary.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



SHAILENDRA KUMAR
PRIMARY EXAMINER
GROUP 1200

S.Kumar
November 11, 1998



JOANN RICHTER
SUPERVISORY PATENT EXAMINER
GROUP 1600

(conference)

Novartis Corporation
Patent and Trademark Dept.
564 Morris Avenue
Summit, NJ 07901-1027